

ABSTRACT

The management of tourist destination information in Ciamis Regency requires a more integrated and systematic approach to data presentation to support tourism analysis. Data collected from multiple sources have different formats and characteristics, making data processing necessary to produce more structured and analyzable information. This condition provides the basis for implementing Business Intelligence to map the potential of tourist destinations, with the Ciamis Regency Tourism Office as the case study.

This study aims to implement Business Intelligence using the Business Intelligence Roadmap method to process data and identify tourist destination potential groups based on the characteristics of the available data. The research process follows six stages of the Roadmap Business Intelligence, namely Justification, Planning, Business Analysis, Design, Construction, and Deployment. The initial dataset consisted of 214 tourist destinations and was filtered based on the completeness of the research variables, resulting in 88 destinations suitable for analysis. The variables used were Total Domestic Tourist Visits, Google Maps Rating, and Ticket Price. Data processing was performed using Python through preprocessing, normalization using StandardScaler (Z-Score), weighting the Total Domestic Tourist Visits variable by 2,5 times, and applying the K-Means Clustering algorithm. The Elbow Method was then used to determine the optimal number of clusters, while the Silhouette Coefficient was applied to evaluate the quality of the clustering results.

The results showed that three clusters represented the optimal grouping, with a Silhouette Score of 0.4886. The clustering results consisted of 5 destinations in the High Potential Cluster, 18 destinations in the Medium Potential Cluster, and 65 destinations in the Low Potential Cluster. The analysis results were subsequently implemented in a Business Intelligence dashboard using Microsoft Power BI, consisting of the Summary, Detailed Data, Distribution Analysis, and K-Means Evaluation pages. The resulting dashboard provides interactive information regarding destination distribution, tourism characteristics, tourism categories, and clustering results, allowing it to be utilized as a supporting tool for data-driven analysis and decision-making in the management of tourist destinations in Ciamis Regency.

Keywords: Business Intelligence, Roadmap Business Intelligence, K-Means Clustering, Total Domestic Tourist Visits, Tourist Destinations.